In the Claims:

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Claim 1 (currently amended):

A pulse laser assisted machining method comprising a fine machining process, said fine 1 1. 2 machining process comprising the following steps of:

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- (a) focusing a laser beam in such a manner that a focal point is located on a workpiece, 3 and that the focal point is separated from a front of the blade of a machinning tool by 4 a microdistance: 5
- moving the workpiece and the machining tool in relation to each other; (b) 6
- softening a focused area by an instantaneous laser heating; 7 (c)
- advancing the machinning tool such that the machined material and the softened (d) 8 material are removed together, and that the same machinning mechanism is repeated 9 until a subsequent laser emission; 10
- 11 wherein the laser beam is brought into focus such that the focal point is separated from the front of the blade of the machinning tool by a distance ranging from several μm to more than 12
- 13 10 µm.

Claim 2 (canceled):

- The method as defined in claim 1, wherein the laser beam is brought into focus such that the 2.
- focal point is separated from the front of the blade of the machinning tool by a distance 2
- ranging from several µm to more than 10 µm.

Claim 3 (original);

3. The method as defined in claim 1, wherein each pulse time of the laser is measured in unit

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2 of microsecond or nanosecond.

Claim 4 (original):

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1 4. The method as defined in claim 1, wherein the focal heating range of the laser has a width

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of several μm to more than 10 μm , and a length of more than 10 μm to several hundred μm . 2

Claim 5 (canceled):

- ι 5. A laser assisted machining device comprising:
- a tool mount; 2
- a machining tool mounted on a tool mount; 3
- a laser head mounted on the tool mount such that the laser beam of the laser head can be
- focused on a workpiece for instantaneously heating and softening the workpiece; 5
- a chip spray mounted on the tool mount for removing chip by a high-pressure fluid emission. 6

Claim 6 (canceled):

- 1 The device as defined in claim 5, wherein the laser head emits pulsed or continuous laser
- beam.

Claim 7 (canceled):

- 7. The device as defined in claim 5, wherein the chip spray removes the chip by a high-pressure 1
- gas or liquid.

Claim 8 (original):

1 8. A laser assisted machining device comprising:

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- 2 a tool mount;
- a machining tool mounted on the tool mount;
- a laser head mounted on the tool mount such that the laser beam of the laser head can be
- focused on a workpiece for instantaneously heating and softening the workpiece;
- a chip spray mounted on the tool mount for removing chip by a high-pressure fluid emission;
- a digital thermometer disposed in a handle of the machining tool or on the tool mount for
- 8 monitoring the temperature of a tool tip of the machining tool; and
- a system controller for receiving data of the tool tip temperature so as to control
- 10 automatically laser.

Claim 9 (original):

- 1 9. The device as defined in claim 8, wherein the chip spray removes the chip by a high-pressure
- 2 gas or liquid..

Claim 10 (original):

- 1 10. The device as defined in claim 8, wherein the laser head emits pulsed or continuous laser
- 2 beam.

Claim 11 (original):

- 1 11. The device as defined in claim 8, wherein the digital thermometer is a thermocouple or
- 2 infrared digital thermometer.